

FIG. 1A

CDR3
EVOLLEQSGA EVRKPGSSVK VSCKASGGTF S<u>GHVIT</u>WVRQ APGQGLEWMG <u>ESIPIEGSAN YAONYAOKER D</u>RVSIIADES TSTSFIEISN IRSDDTAVYY CAR<u>DPRXCS AGRCYPGEEO O</u>WGQGTLVTV SS

CDR3
EVOLLEQSGA EVKKPGSSVK VSCOVFGDTF S<u>RYTIQ</u>WLRQ APGQGPEWMG <u>NIIPVYNITPN YAOKEOG</u>RLS ITADDSTSTA YMELSSLRSE DTAVYFCAR<u>V VIPNAIRHTIM GYXEDX</u>WGQG TLVTVSS

FIG. 1B



FIG. 1C

CDR3
EVQLLEQSGA EVKKPGSSVK VSCKASGGTF S<u>GHVIS</u>WVRQ APGQGLEWMG <u>GSISFEGTSN SAOKFOG</u>RVS ITADESASTA YMELSSIRSE DTAIYYCAK<u>D PPRECSGGNC YPGFFOO</u>WGQ GTLVTVSS

CDR3
EVQLIESGGG VVOPGRSIRL SCAASGFTFK <u>TYGMH</u>WVRQA PGKGLEWVA<u>G ISEDGSNOYY ADSVKG</u>RFIV SRDNSRDTVF LQMSSIRLED TAVYYCAT<u>EG SPEGSIKGRY YLEN</u>WGQGTL VTVSS

FIG. 1D



FIGURE 1E

CDR 1 EVQLLESGGG VVQPGRSLRL SCAASGFTFS <u>AYGMH</u>WVRQA PGKGLEWVAG <u>IWFDGSNQYYSDSVKG</u>RFTV

CDR 3 SRDNSRNTLF LQMNSLRPED TAVYYCAT<u>EV LFGSIKGRYY LEN</u>WGQGTLVTVSS

FIGURE 1F

CDR 1 EVQLLESGPG LVKPSGTLSL TCTVSGGSIR S<u>SHWWS</u>WVRQ PPGKGLEWIG <u>EVFFSGSTIYNPSLND</u>RVFM

CDR 3 SVDKSKDQVS LRLSSVTAAD TAVYYCAR<u>SP IKMNOGRMML DAFDI</u>WGQGTLVIVSS

FIGURE 1G

CDR 1 EVQLLESGSE VKKPGSSVKV SCRASGGSFR <u>SYNFN</u>WVRQA PGQGLEWMGG <u>IIPMFGTANYAQKFQG</u>RVTI

CDR 3 TADESTATGY MELSSLRSED TAVYYCAM<u>PY PKHCSRGSCW GWFDP</u>WGQGTLVTVSS



FIG. 2A

CDR 2
AELTOSPGTL SLSPGERATL SC<u>RASOSVSS NYLA</u>WYQQRP GQAPRLLI<u>YG ASSRAT</u>GIPD RFSGSGSGTD FTLTISRLEP EDFAVYYC<u>OL YGNSRWT</u>FGQ GTKVEIK

CDR 1
AELTQSPATL SI.SPGERATL SC<u>RASOSVNK YLA</u>WYQQXPG QAPRILIY<u>DA SNRA</u>TGIPAR FSGSGSGTDF TLTISNLEPE DFAVYYC<u>QOR SDWY</u>TFGGGT KVEIK

FIG. 2B



FIG. 2C

CDR3
AELTQSPGTL SLSPGERATL SC<u>GASOSVRS NYLA</u>WYQQKP GQAPRLLIY<u>G VSSRAT</u>GIPD RFSGSGSGTD FTLTISRLEP EDFAVYYC<u>OO YGSSPRT</u>FGQ GTKLEIK

CDR 1
AELTOSPATL SVSPGERASL SC<u>RASOSVGN NLA</u>WYQOXPG OAPRLLIY<u>GG NTRAT</u>GTPDR FSGSGSGTEF TLTISSLOSE DFAVYFC<u>OHY STWPLT</u>FGGG TKVEFK

FIG. 20



FIGURE 2E

CDR 1
AELTOSPGTL SLSVGERATL SCRASONIYS GYLGWYQOKP GOPPRLLIYG ASNBAIGIPD

CDR 3 - RFSGSGSGTD FTLTISRLES EDFAVYYCQQ YGSPPYTFGQ GTKVEIK

FIGURE 2F

CDR 1 AELTQSPSSL SAFVGDRVTI TC<u>RASQSISR NLN</u>WYQQKPG TAPKVLIY<u>AA SSLQS</u>GVPSR

CDR 3 - FSGSGSGTDF TLTITSLQPE DFATYYCQQS YTTPRIFGQG TKVEVK

FIGURE 2G

- RESGSGSGTD FTLSISRLEP EDFAVYYC<u>OO YGIPHI</u>FGOG TKVEIK CDR 2 AELTQSPGTL SLSPGERATL SC<u>RASQSLSS KYLA</u>WYQQKP GQAPRLFIY<u>D ASSRAI</u>GIPD CDR 3



FIG. 3A

CTATGGTGCA TCCAGCAGGG CCACTGGCAT CCCAGACAGG TTCAGTGGCA GTGGGTCTGG GACAGACTTC SAGCTCACGC AGTCTCCAGG CACCCTGTCT TTGTCTCCAG GGGAAAGAGC CACCCTCTCC TGCAGGGCCA STCAGAGTGT TAGCAGCAAT TACTTAGCCT GGTACCAGCA GAGACCTGGC CAGGCTCCCA GGCTCCTCAT ACTCTCACCA TCAGCAGACT GGAGCCTGAA GATTTTGCAG TGTATTACTG TCAGCTTTAT GGTAACTCAC GTTGGACGTT CGGCCAAGGG ACCAAGGTGG AGATCAAA

TGATGCATCC AACAGGGCCA CTGGCATCCC AGCCAGGTTC AGTGGCAGTG GGTCTGGGAC AGACTTCACT CTCACCATCA GCAACCTAGA GCCTGAAGAT TTTGCAGTTT ATTACTGTCA GCAGCGTAGC GACTGGGTCA GTCAGAGTGT TAACAAGTAC TTAGCCTGGT ACCAACAGAA ACCTGGCCAG GCTCCCAGGC TCCTCATCTA 3AGCTCACTC AGTCTCCAGC CACCCTGTCT TTGTCTCCAG GGGAAAGAGC CACCCTCTCC TGCAGGGCCA CTTTCGGCGG AGGGACCAAG GTGGAGATCA AA

FIG. 3B



FIG. 30

CTATGGTGTA TCCAGCAGGG CCACTGGCAT CCCAGACAGG TTCAGTGGCA GTGGGTCTGG GACAGACTTC ACTCTCACCA TCAGCAGACT GGAGCCTGAA GATTTTGCAG TGTATTACTG TCAGCAGTAT GGTAGCTCAC GTCAGAGTGT TAGGAGCAAC TACTTAGCCT GGTACCAGCA AAAACCTGGC CAGGCTCCCA GGCTCCTCAT GAGCTCACGC AGTCTCCAGG CACCCTGTCT TTGTCTCCAG GGGAAAGAGC CACCCTCTCC TGCGGGGCCA CTCGGACTTT TGGCCAGGGG ACCAAGTTGG AGATCAAA

IGGIGGAAAC ACCAGAGCCA CIGGTACCCC AGACAGGTIC AGIGGCAGIG GGICIGGGAC AGAAITCACI GTCAGAGTGT CGGTAACAAT TTAGCTTGGT ATCAGCAGAA ACCTGGCCAG GCTCCCAGGC TCCTCATTTA GAGCTCACGC AGTCTCCAGC CACCCTGTCT GTGTCTCCAG GGGAAAGAGC CTCCCTCTCC TGCAGGGCCA CTCACCATCA GCAGCCTGCA GTCTGAGGAC TITGCAGTIT ATTTCTGTCA ACACTATAGT ACCTGGCCGC ICACITITCGG CGGGGGGACC AAGGICGAGI ICAAG

FIG. 3D



FIGURE 3

GAGGTGCAGC TGCTCGAGTC TGGGGGAGGC GTGGTCCAGC CTGGGAGGTC CCTGAGACTC TCCTGTGCAG CGTCTGGATT CACCTTCAGT GCTTATGGCA TGCACTGGGT CCGCCAGGCT CCAGGCAAGG GGCTGGAGTG GGTGGCAGGT ATATGGTTTG ATGGAAGTAA TCAATACTAT TCAGACTCCG TGAAGGGCCA ATTCACCGTC TCCAGAGACA ATTCCAGGAA CACGCTGTTT CTGCAAATGA ACAGCCTGAG ACCCGAGGAC ACGGCTGTCT ATTACTGTGC GACAGAGGTA CTTTTTGGAT CGATTAAGGG GCGTTACTAC CTTGAAAACT GGGGCCAGGG AACCCTGGTC ACCGTCTCCT CA

FIGURE 3F

GCGGAGCTCA CCCAGTCTCC ATCGTCCCTG TCTGCATTTG TNGGAGACAG AGTCACCATC ACTTGCCGGG CAAGTCAGAG TATTAGCAGG AACTTAAATT GGTATCAGCA GAAACCAGGG ACAGCCCCTA AGGTCCTGAT CTATGCTGCA TCCAGTTTGC AAAGTGGGGT CCCATCGAGG TTCAGTGGCA GTGGATCTGG GACAGATTC ACTCTCACCA TCACCAGTCT GCAACCTGAA GATTTTGCAA CTTACTATTG TCAACAGAGT TACACAACCC CTCGGACGTT CGGCCAAGGG ACCAAGGTGG AAGTCAAA

FIGURE 3G

GCCGAGCTCA CGCAGTCTCC AGGCACCCTG TCTTTGTCTC CAGGGGAAAG AGCCACCCTC TCCTGCAGGG CCAGTCAGAG TCTTAGCAGO AAATACTTAG CNTGGTACCA ACAGAAACCT GGCCAGGCTC CCAGGCTCTT CATTTATGAT GCATCCAGCA GGGCCACTGG CATCCCAGAC AGGTTCAGTG GCAGTGGGTC TGGGACAGAC TTCACTCTCA GCATCAGCAG ATTGGAGCCT GAAGATTTTG CAGTGTATTA CTGTCAGCAG TATGGAACAC CTCGCACCTT CGGCCAGGGG ACCAAGGTGG AAATCAAA



FIG. 4A

CTCGAGCAGT CTGGGGCTGA GGTGAGGAAG CCTGGGTCCT CGGTGAAGGT CTCCTGCAAG GCTTCTGGAG 3CACCTTCAG CGGCCATGTT ATCACCTGGG TGCGACAGGC CCCTGGACAA GGACTTGAGT GGATGGGAGA ATTATCGCGG ACGAATCCAC GAGCACGTCG TTCATTGAGC TGAGCAACCT GAGATCTGAC GACACGGCCG SAGCATCCCT ATCTTTGGTT CCGCAAACTA CGCTCAAAAC TACGCTCAGA AATTCCGGGA CAGAGTCTCG ICTACTACTG TGCGAGAGAC CCTCCAAGAT ATTGCAGTGC TGGTAGATGC TACCCGGGAT TCTTCCAGCA FIGGGGCCAG GGCACCCTCG TCACCGTCTC CTCA

ACACCITCAG CAGATACACT ATTCAGTGGT TGCGACAGGC CCCTGGACAA GGGCCTGAGT GGATGGGAAA GATTCCACGA GCACAGCCTA CATGGAACTG AGTAGCCTCA GATCTGAGGA CACGGCCGTC TATTTCTGTG CGAGAGTCGT AATACCAAAT GCAATCCGGC ACACGATGGG ATATTACTTT GACTACTGGG GCCAGGGAAC CTCGAGCAGT CTGGGGCTGA GGTGAAGAAG CCTGGGTCCT CGGTGAAGGT CTCCTGTCAG GTTTTTGGAG TATCATCCCT GTCTATAATA CACCAAACTA CGCGCAGAAG TTTCAGGGCA GACTCTCGAT AACCGCCGAC CCTGGTCACC GTCTCCTCA

FIG. 4B



FIG. 4C

GCACCTTCAG CGGCCATGTT ATCAGCTGGG TGCGACAGGC CCCTGGACAA GGGCTTGAGT GGATGGGGGG GAGTATCTCT TTCTTTGGCA CATCAAACTC CGCACAGAAG TTCCAGGGCA GAGTCTCGAT TACCGGGGAC CTCGAGCAGT CTGGGGCTGA GGTGAAGAAG CCTGGGTCCT CAGTGAAGGT CTCCTGCAAG GCTTCTGGAG GAATCCGCGA GCACAGCCTA CATGGAGCTG AGTAGCCTGA GATCGGAGGA CACGGCCATC TATTACTGTG CGAAAGACCC TCCAAGATTT TGTAGTGGTG GTAACTGCTA CCCGGGGTTC TTCCAGCAGT GGGGCCAGGG CACCCTGGTC ACCGTCTCCT CA

-1G. 4D

CCTTCAAGAC GTATGGCATG CACTGGGTCC GCCAGGCTCC AGGCAAGGGG CTGGAGTGGG TGGCAGGTAT CTCGAGTCGG GGGGAGGCGT GGTCCAGCCT GGGAGGTCCC TGAGACTCTC CTGTGCAGCG TCTGGATTCA ICCAGGGACA CGGTGTTTCT GCAGATGAGC AGCCTGAGAC TCGAGGACAC GGCTGTCTAT TACTGTGCGA ITCGTITGAT GGAAGTAACC AATATTACGC AGACTCCGTG AAGGGCCGAT TCATCGTCTC CAGAGACAAT CAGAGGGTTC TCCTTTTGGC TCGATTAAGG GGCGTTACTA CCTTGAAAAT TGGGGCCAGG GAACCCTGGT CACCGTCTCC TCA



FIGURE 41

GAGGTGCAGC TGCTCGAGTC TGGGGGAGGC GTGGTCCAGC CTGGGAGGTC CCTGAGACT. ICCTGTGCAG CBTCTGGATT CACCTTCAGT BCTTATGGCA TBCACTGGGT CCGCCAGGCT CCAGGCAAGG GGCTGGAGTG TCCAGAGACA ATTCCAGGAA CACGCTGTTT CTGCAAATGA ACAGCCTGAG ACCCGAGGAC ACGGCTGTCT GGTGGCAGGT ATATGGTTTG ATGGAAGTAA TCAATACTAT TCAGACTCCG TGAAGGGCCG ATTCACCGTC ATTACTGTGC GACAGAGGTA CTTTTGGAT CGATTAAGGG GCGTTACTAC CTTGAAAACT GGGGCCAGG AACCCTGGTC ACCGTCTCCT CA

FIGURE 4F

GAGGIGCAGC TGCTCGAGTC GGGCCCAGGA CTGGTGAAGC CTTCGGGGAC CCTGTCCCTC ACCTGCACTG ICTCTGGTGG CTCCATCAGG AGCAGTCACT GGTGGAGTTG GGTCCGCCAG CCCCCAGGGA AGGGACTGGA ICTGTAGACA AGTCCAAGGA CCAGGTCTCC CTGAGGCTGA GCTCTGTGAC CGCCGCGGAC ACGGCCGTGT GTGGATTGGA GAAGTCTTTT TTAGTGGAAG CACCATCTAC AACCCATCCC TCAACGATCG AGTCTTCATG ATTACTGTGC GAGATCCCCC ATAAAAATGA ATCAGGGAAG AATGATGTTG GATGCCTTTG ATATCTGGGG **SCAGGGGACA CTCGTCATCG TCTCTTCC**

FIGURE 4G

GAGGTGCAGC TGCTCGAGTC TGGGTCTGAG GTGAAGAAGC CTGGGTCTTC GGTGAAGGTC TCCTGCAGGG ACCECEBACE AATCCACEEC CACAEECTAC ATGGAGTTGA ECAETCTEAG ATCTGAAGAC ACEECCETT CCTCTGGAGG CAGCTTCAGA AGCTACAATT TCAATTGGGT GCGACAGGCC CCTGGACAAG GTCTTGAGTG ATTACTGTGC GATGCCCTAT CCAAAACATT GCAGTCGTGG AAGTTGCTGG GGCTGGTTCG ACCCCTGGGG GATGGGAGGC ATCATCCCTA TGTTCGGAAC AGCAAACTAC GCACAGAAGT TTCAGGGCAG AGTCACAATI CCAGGGAACT CTGGTCACCG TGTCTTCA